# DTS Dimming Bypass Module

INTRODUCTION

## OVERVIEW

The DTS is a dimming bypass module used with an inverter or generator in emergency systems. The DTS works by constantly sensing for the presence of utility power. When utility power is no longer sensed (during a power outage), the DTS will bypass any dimming or controls integral to or networked with the fixture. Fixtures that can be dimmed must return to an undimmed (or pre-determined) state with loss of utility power, to meet UL924 requirements.

## LUMINAIRE USE

The DTS cannot be used in conjunction with GTD, ATSD or ELL14/40 (Emergency Battery Pack) options. Each luminaire has different restrictions of use, please check individual specification sheets for compatibility. The DTS is available only as a factory-installed option.

## EMERGENCY CIRCUITS

**While the DTS is UL924 listed, it is not used to transfer power. The transfer of power must happen through a UL1008 module, (such as an AETS – Automatic Emergency Transfer Switch), to meet building code.** The DTS is to be used in conjunction with an emergency AC power supply, such as an inverter or generator.

*These systems are designed/specified by qualified professionals.*

## CONNECTIONS FROM FIXTURE TO BUILDING SYSTEM

The following 10 cases are outlined in the included wiring diagram package if further information is needed. The following outlines key connections to perform when installing new fixtures, as well as wiring internal to the fixture.




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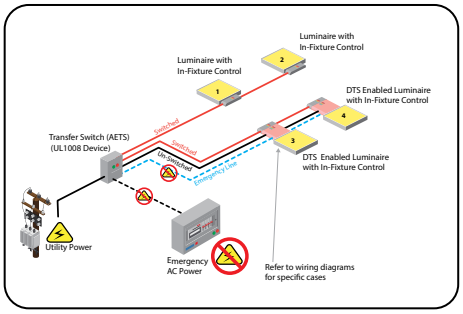
# DTS Dimming Bypass Module

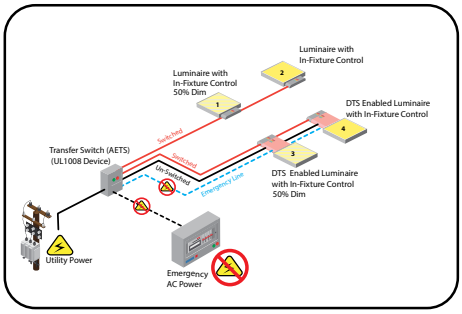
SYSTEM LAYOUT EXAMPLES

## EXAMPLE OF BASIC SYSTEM LAYOUT

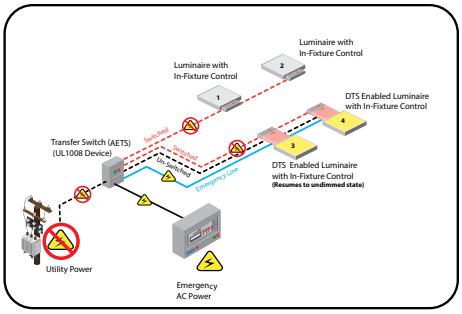
Below are 3 situations of a system layout using a DTS module
*Specific layouts may vary




**SITUATION 1 (below)**
Normal Undimmed Operation



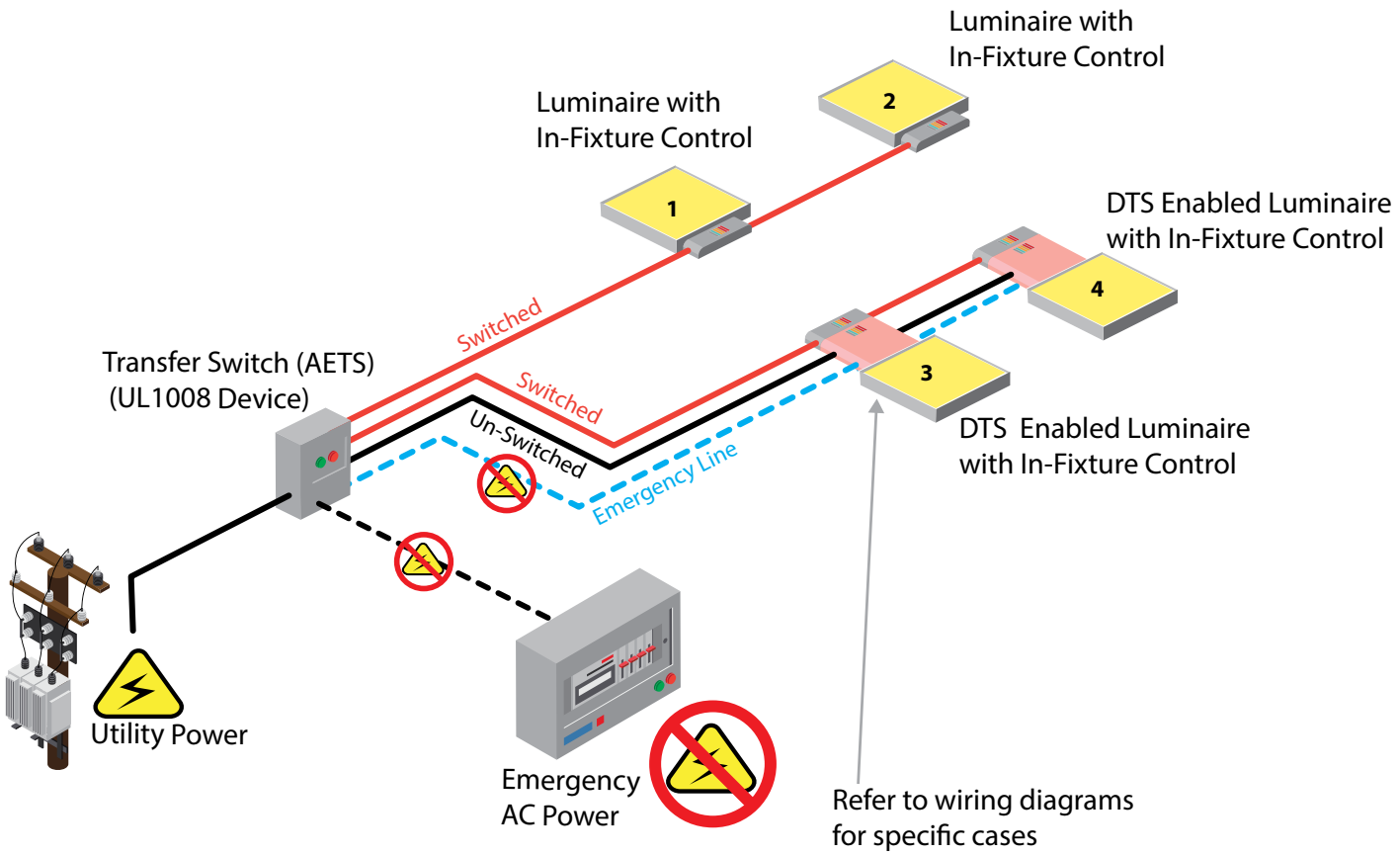

**SITUATION 2 (pg. 3)**
Dimmed Operation




**SITUATION 3 (pg. 4)**
Emergency Operation

## SITUATION 1: NORMAL UNDIMMED OPERATION

- Each luminare has in-fixture control and is not dimmed
- Luminaires 3 & 4 are also emergency enabled with DTS modules

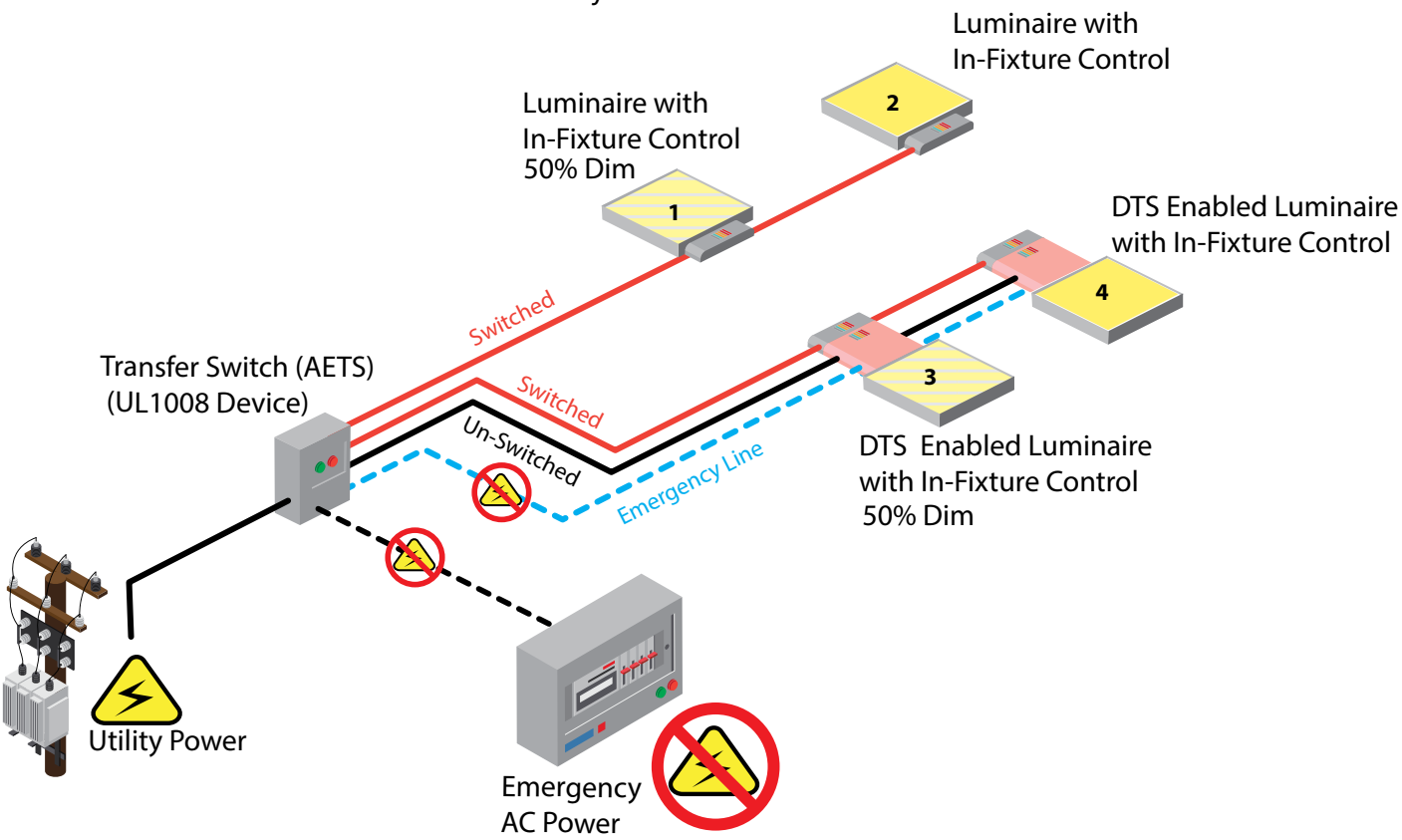


# DTS Dimming Bypass Module

SYSTEM LAYOUT EXAMPLES

## SITUATION 2: NORMAL UTILITY POWER OPERATION, INDIVIDUAL DIMMING CONTROL

- Luminaires 1 & 3 are in a dimmed state by user choice

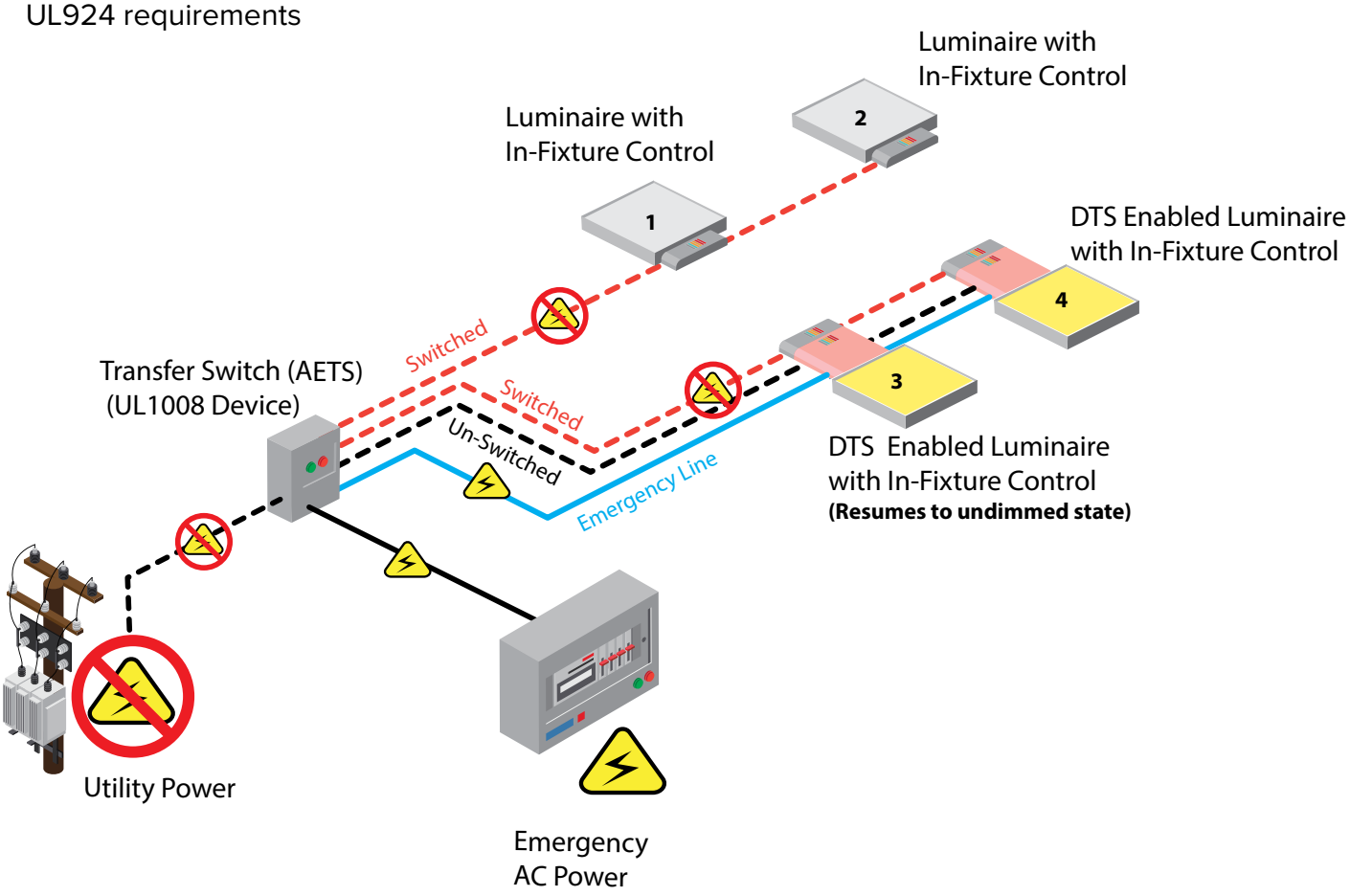


# DTS Dimming Bypass Module

SYSTEM LAYOUT EXAMPLES

## SITUATION 3: LOSS OF UTILITY POWER

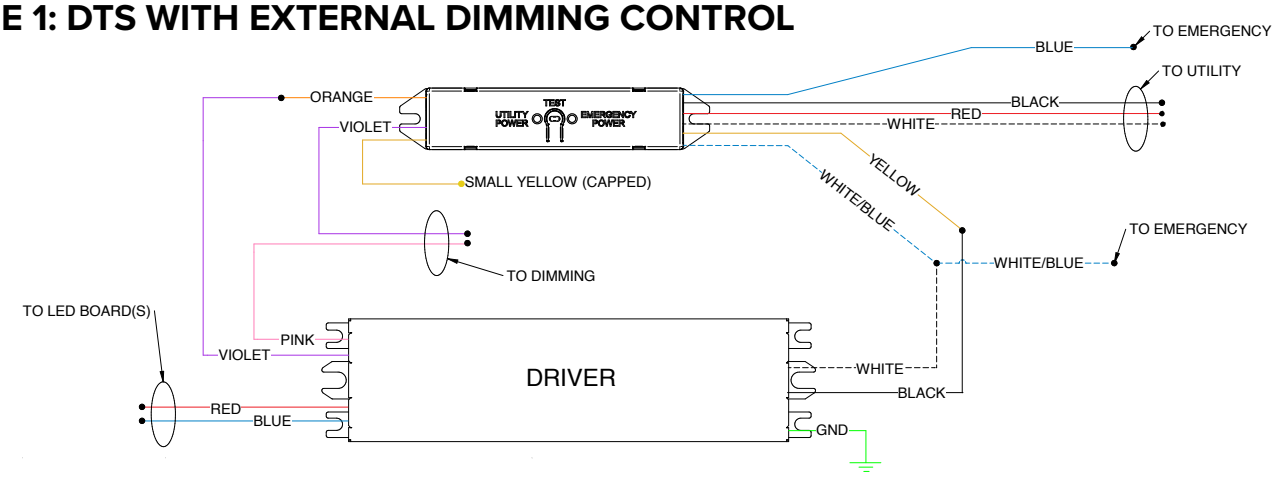
- Transfer switch will transfer power from utility to emergency power source
- Luminaires 1 & 2 lose power
- DTS opens dimming circuits in luminaires 3 & 4 which then resume their undimmed state to meet UL924 requirements



# DTS Dimming Bypass Module

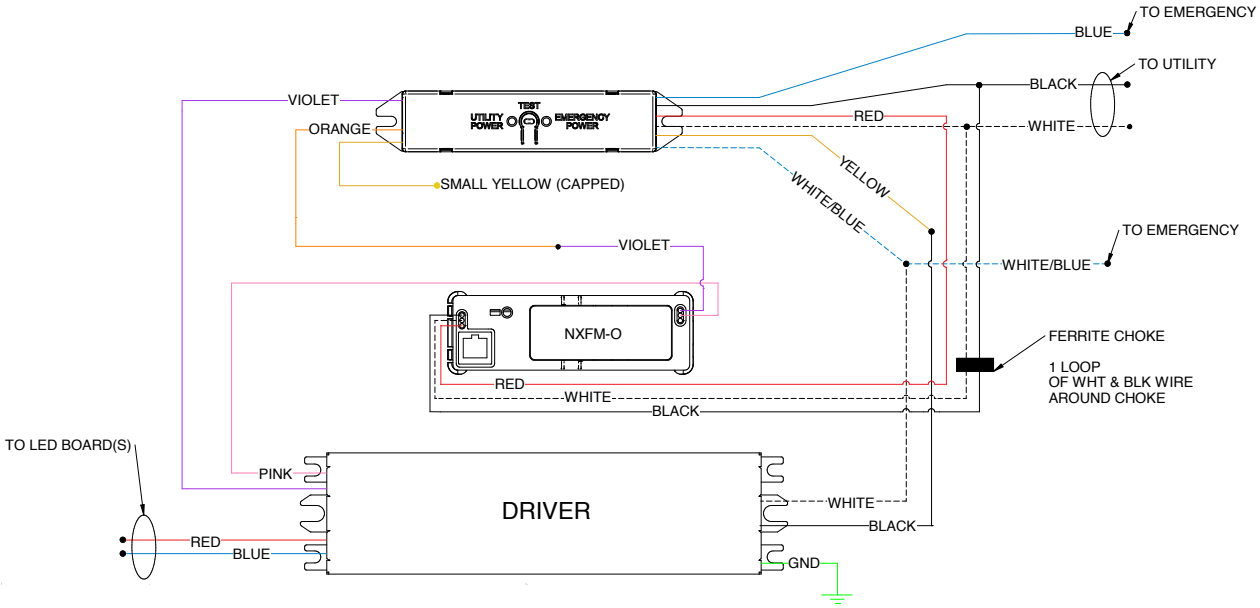
WIRING DIAGRAMS

## CASE 1: DTS WITH EXTERNAL DIMMING CONTROL




| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |
| Red | Switched Hot |
| Violet | Dimming |
| Pink | Dimming |

## CASE 2: DTS WITH INTERNAL NXFM-O OR NXFM-I

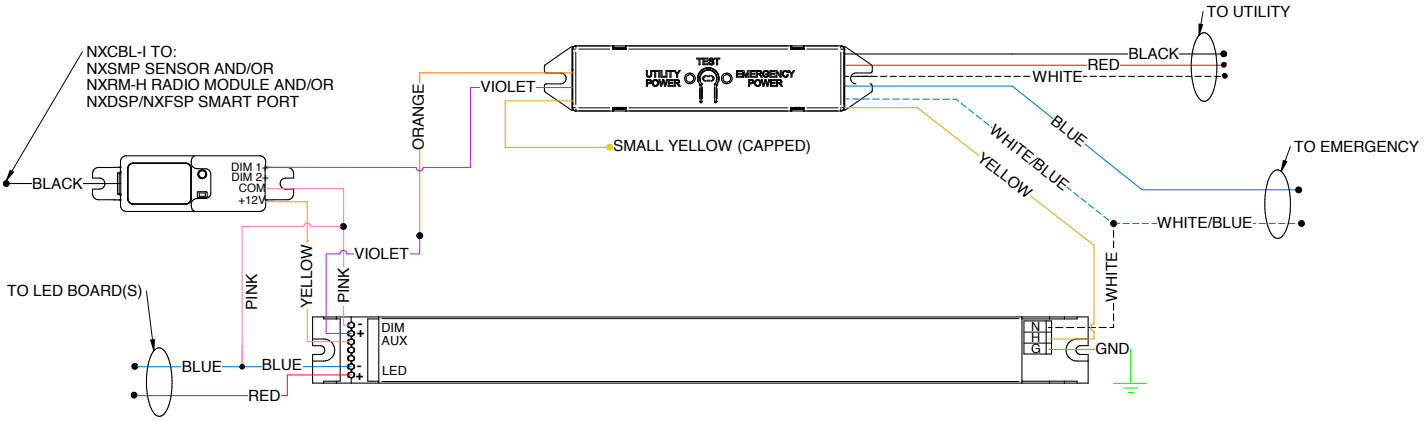



| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |

# DTS Dimming Bypass Module

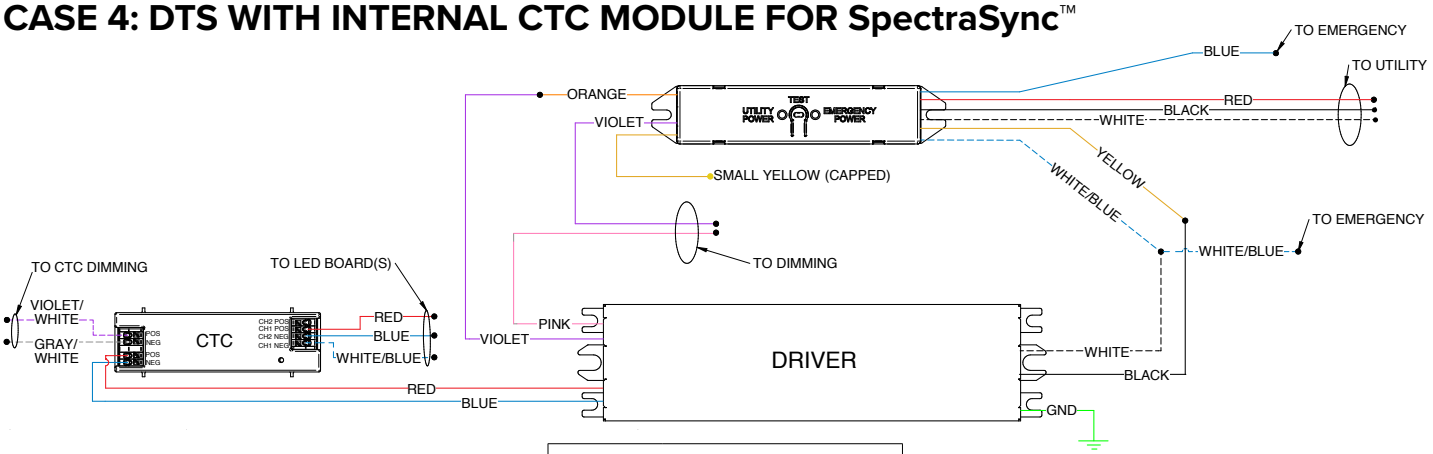
WIRING DIAGRAMS

## CASE 3: DTS WITH INTERNAL NXFM-LV




| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |
| Red | Switched Hot |

## CASE 4: DTS WITH INTERNAL CTC MODULE FOR SpectraSync™

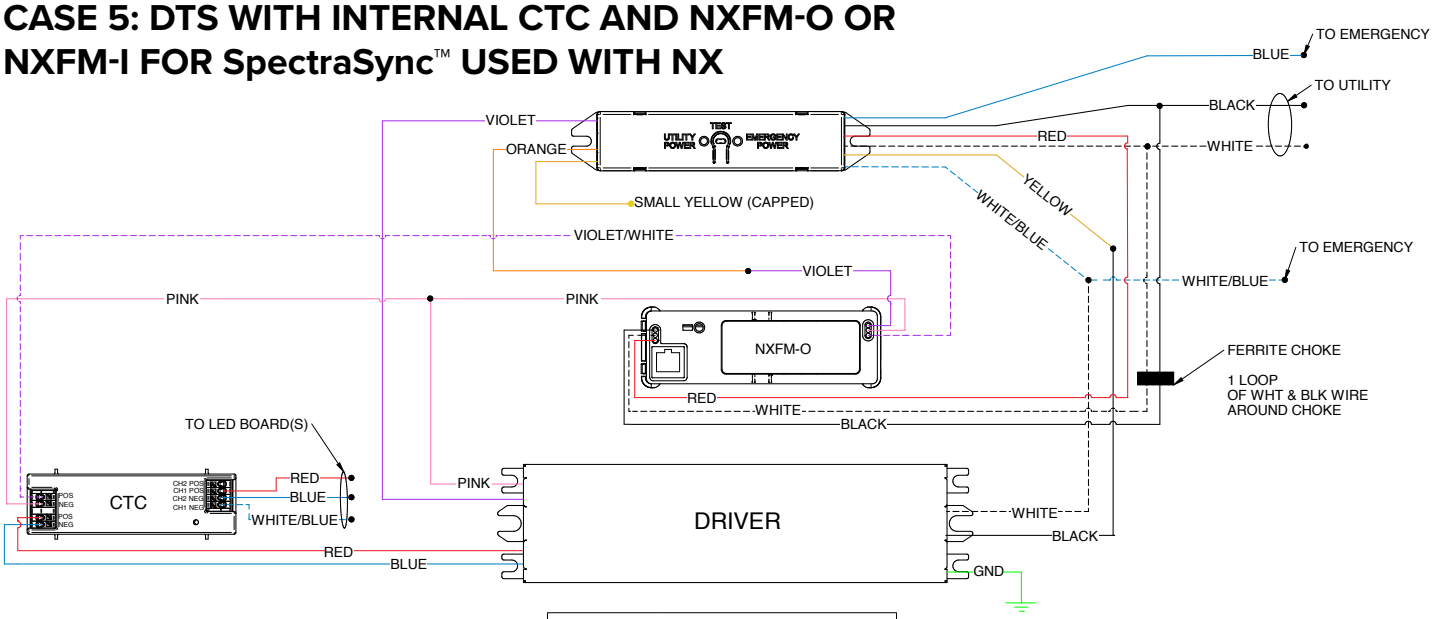



| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |
| Red | Switched Hot |
| Violet | Dimming (+) |
| Pink | Dimming (-) |
| Violet/White | CCT Dimming (+) |
| Gray/White | CCT Dimming (-) |

# DTS Dimming Bypass Module

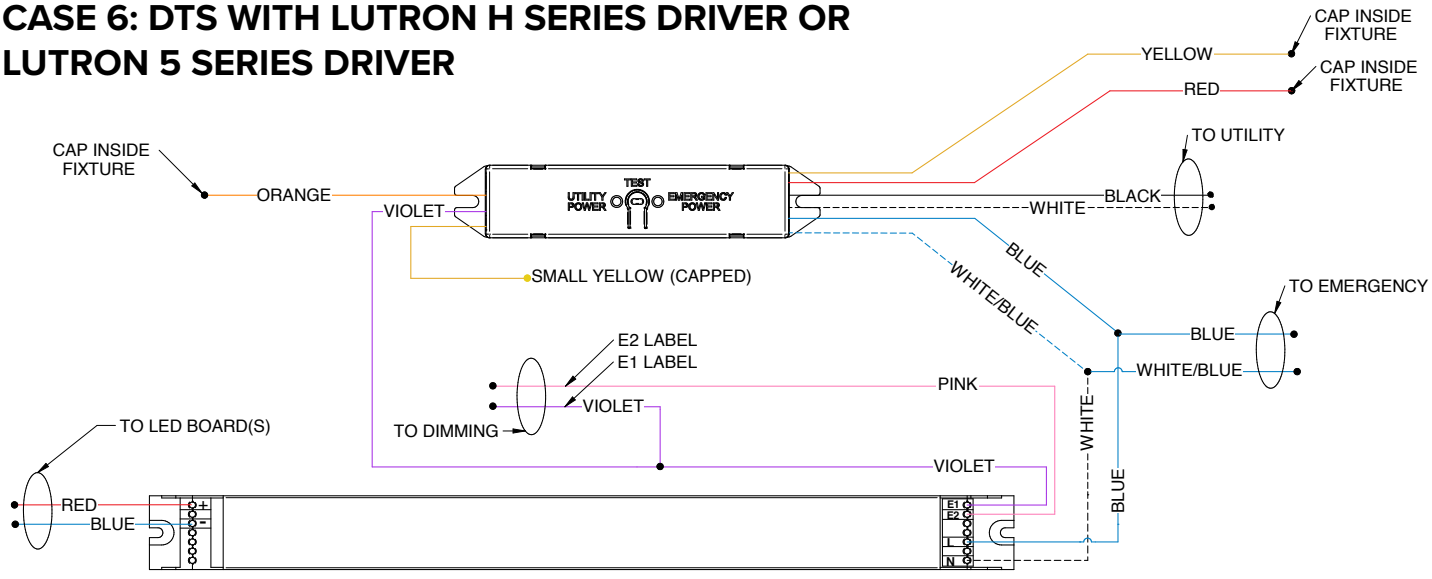
WIRING DIAGRAMS

## CASE 5: DTS WITH INTERNAL CTC AND NXFM-O OR NXFM-I FOR SpectraSync™ USED WITH NX




| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |

## CASE 6: DTS WITH LUTRON H SERIES DRIVER OR LUTRON 5 SERIES DRIVER

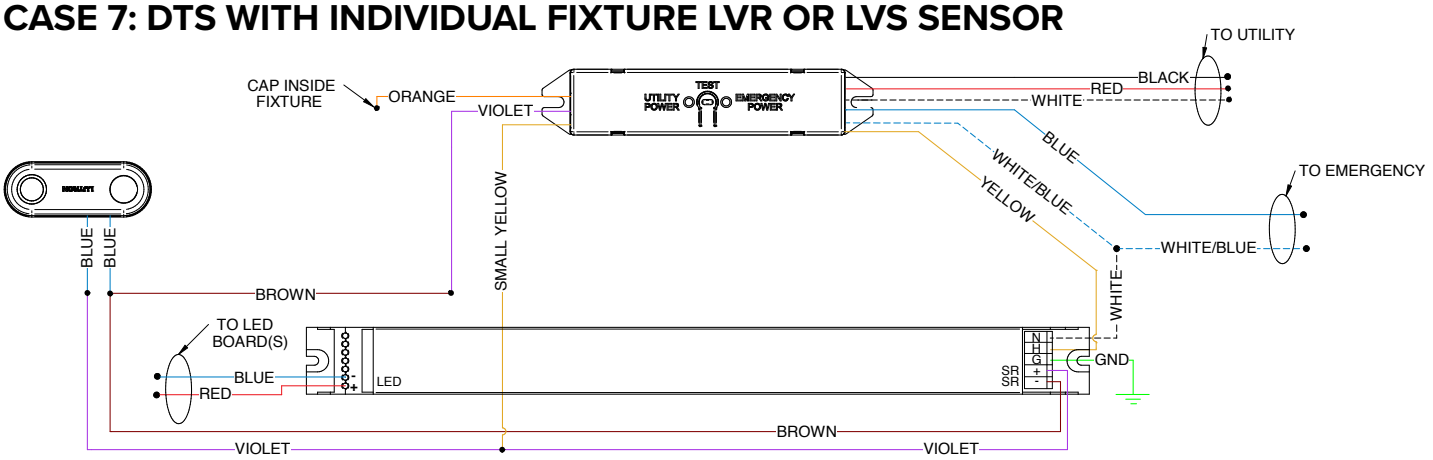



| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |
| Red | Switched Hot |
| Violet | Dimming |
| Pink | Dimming |

# DTS Dimming Bypass Module

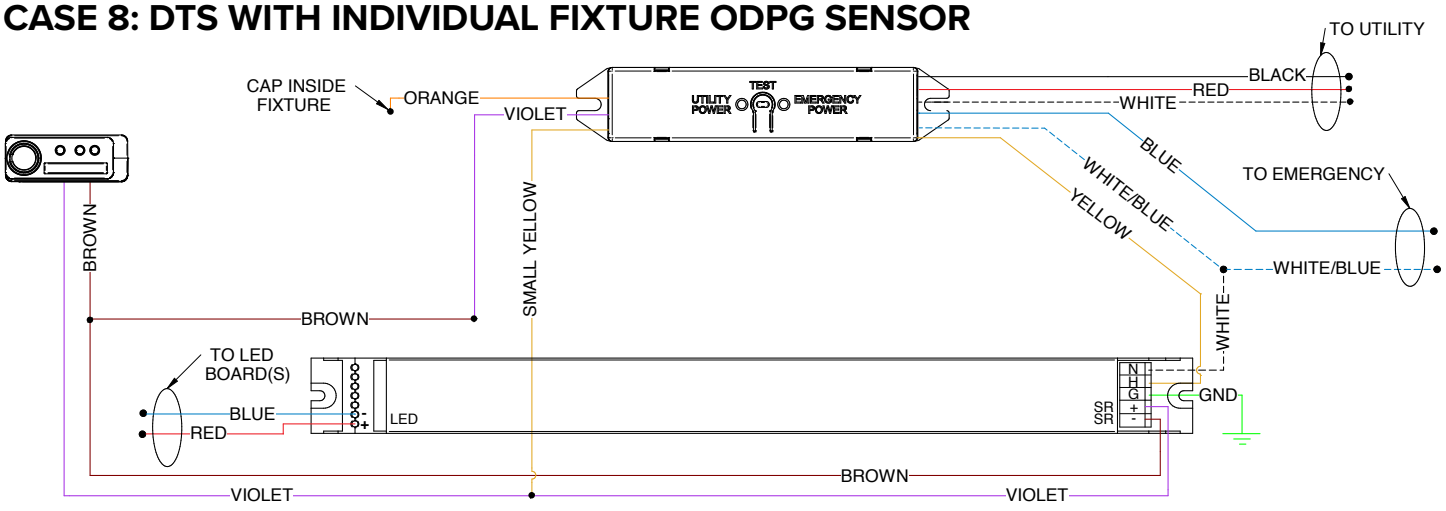
WIRING DIAGRAMS

## CASE 7: DTS WITH INDIVIDUAL FIXTURE LVR OR LVS SENSOR




| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |
| Red | Switched Hot |

## CASE 8: DTS WITH INDIVIDUAL FIXTURE ODPG SENSOR

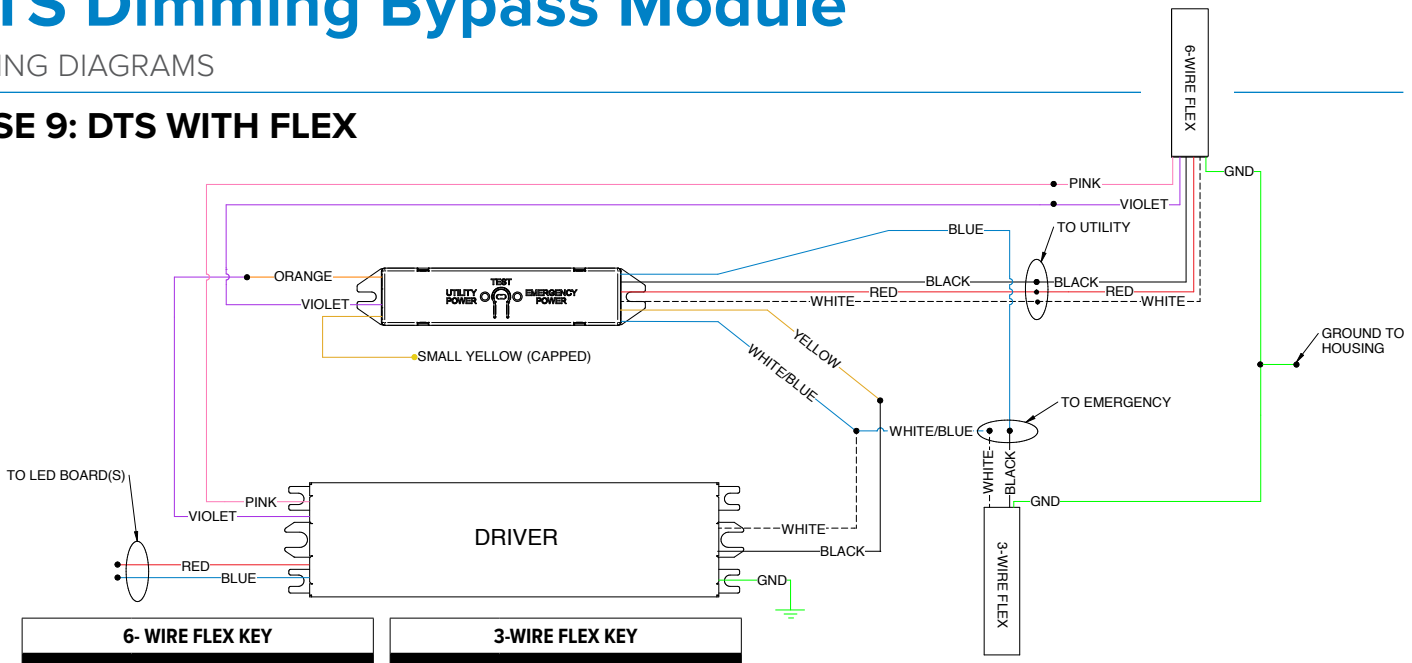



| KEY | |
|---|---|
| **Color** | **Connects With** |
| White/Blue | Emergency Neutral |
| Blue | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |
| Red | Switched Hot |

# DTS Dimming Bypass Module

WIRING DIAGRAMS

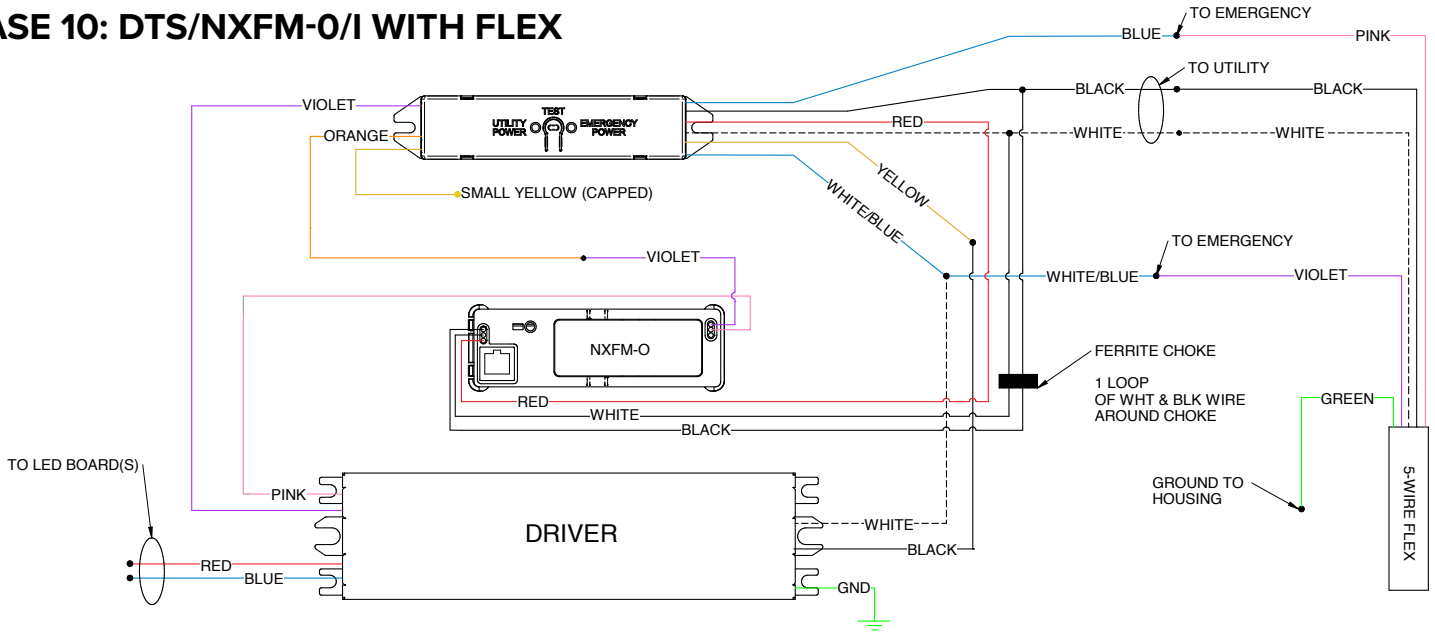
## CASE 9: DTS WITH FLEX




| 6- WIRE FLEX KEY | |
|---|---|
| **Color** | **Connects With** |
| Black | Utility Line (Unswitched Hot) |
| White | Utility Neutral |
| Red | Switched Hot |
| Violet | Dimming |
| Pink | Dimming |
| Green | Ground |

| 3-WIRE FLEX KEY | |
|---|---|
| **Color** | **Connects With** |
| White | Emergency Neutral |
| Black | Emergency Line |
| Green | Ground |

## CASE 10: DTS/NXFM-0/I WITH FLEX




| 5-WIRE FLEX KEY | |
|---|---|
| **Color** | **Connects With** |
| Violet | Emergency Neutral |
| Pink | Emergency Line |
| Black | Utility line (Unswitched Hot) |
| White | Utility Neutral |
| Green | Ground |